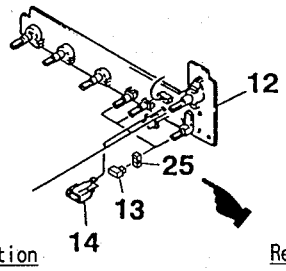
TA-F190

SERVICE MANUAL

Germany Model

This set is almost the same as model TA-F170 previousy produced.
Therefore, see the TA-F170/F240 service manual for the information which is contained in this service manual.

☛ :Modified point

<table>
<tr><th>Page</th><th>TA-F170</th><th>TA-F190</th></tr>
<tr><td>1</td><td>Power consumption
Model Germany
<table>
<tr><td></td><td></td><td>TA-F170</td></tr>
<tr><td rowspan="2">DIN 1 kHz</td><td>4 ohms</td><td>50 W + 50 W</td></tr>
<tr><td>8 ohms</td><td>35 W + 35 W</td></tr>
</table></td><td>Power consumption
<table>
<tr><td rowspan="2">DIN 1 kHz</td><td>4 ohms</td><td>55 W + 55 W</td></tr>
<tr><td>8 ohms</td><td>35 W + 35 W</td></tr>
</table></td></tr>
<tr><td>14</td><td>Ref. No. Part No. Description Remark
2 4-945-182-01 PANEL, FRONT (F170)
13 4-945-176-01 BUTTON (18X11)
----------</td><td> 

Ref. No. Part No. Description Remark
2 4-945-182-32 PANEL, FRONT
13 4-947-011-01 BUTTON (F)
25 4-864-307-00 RING</td></tr>
<tr><td>15</td><td>57 4-945-480-01 SHEET, INSULATING
59 * 2-379-614-01 HOOK
60 3-706-165-00 SCREW
61 * 4-944-986-21 PANEL, BACK (F170:GERMANY)</td><td>57 not supplide
59 * 4-949-235-01 HOOK
60 4-947-010-01 SCREW, FEEDER FIXED
61 * 4-944-986-61 PANEL, BACK</td></tr>
<tr><td>20</td><td>3-753-389-11 MANUAL, INSTRUCTION
* 4-944-050-01 INDIVIDUAL CARTON
* 4-945-810-01 CUSHION (LEFT) (F240)
* 4-945-811-01 CUSHION (RIGHT) (F240)
# 5 7-682-549-04 SCREW +BVTT 3X10 (S)</td><td>3-755-007-41 MANUAL, INSTRUCTION (GERMAN)
* 4-951-286-01 INDIVIDUAL CARTON
* 4-945-810-01 CUSHION (LEFT)
* 4-945-811-01 CUSHION (RIGHT)
# 5 7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3</td></tr>
</table>

MICROFILM

INTEGRATED STEREO AMPLIFIER

SONY®

SECTION 3
ELECTRICAL ADJUSTMENT

Note:

- Adjustment should be performed 10 minutes after the POWER switch on (POWER ON).

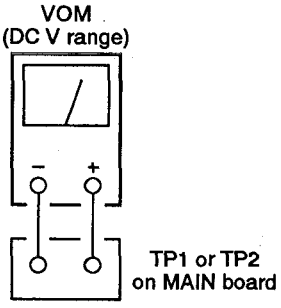
Bias Current Adjustment

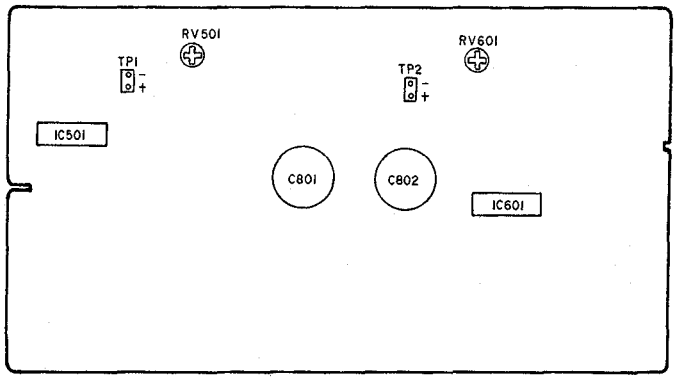
Setting:

VOLUME control: minimum

Adjustment Location:

[MAIN BOARD] — Component Side —





Procedure:

Adjust RV501 (L-CH) and RV601 (R-CH) so as to obtain 4 mV at TP1 and TP2 respectively.

9-956-967-11

Sony Corporation
Audio Group

English
92C2121-1
Printed in Japan
©1992. 3
Published by Customer Relations and Service Group

TA-F170/F240

SERVICE MANUAL

AEP Model
E Model
Germany Model
TA-F170
UK Model
TA-F170/F240

Photo: TA-F170

SPECIFICATIONS

Amplifier

Continuous RMS power output (both channels driven simultaneously)

Models for Scandinavian countries, Spain and Portugal

		TA-F170
DIN 1 kHz	6 ohms	50 W + 50 W
	8 ohms	40 W + 40 W
20 Hz – 20 kHz	8 ohms	30 W + 30 W THD 0.05 %

Model Germany

		TA-F170
DIN 1 kHz	4 ohms	50 W + 50 W
	8 ohms	35 W + 35 W
20 Hz – 20 kHz	4 ohms	—
20 Hz – 20 kHz	8 ohms	30 W + 30 W THD 0.05%

Model UK

		TA-F170	TA-F240
DIN 1 kHz	4 ohms	50 W + 50 W	80 W + 80 W
	8 ohms	40 W + 40 W	70 W + 70 W
20 Hz – 20 kHz	8 ohms	30 W + 30 W THD 0.05 %	60 W + 60 W 0.05 %

AEP, E Model

		TA-F170
DIN 1 kHz	4 ohms	50 W + 50 W
	8 ohms	40 W + 40 W
20 Hz – 20 kHz	4 ohms	—
20 Hz – 20 kHz	8 ohms	30 W + 30 W THD 0.05 %

Tone controls

	Response	Turnover frequency
BASS	**± 6 dB**	**500 Hz**
TREBLE	**± 6 dB**	**3 kHz**

Input

Input jack		Jack type	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO	MM	Phono	2.0 mV	50 kilohms	**76 dB (A, 5 mV)**
	MC		170 μV	100 ohms	75 dB (A, 0.5 mV)
TUNER, CD, AUX, TAPE/DAT		Phono	150 mV	50 kilohms	**96 dB (150 mV)**

— Continued on next page —

MICROFILM

INTEGRATED STEREO AMPLIFIER

SONY

Output

Output jack	Jack type	Voltage/impedance
REC OUT	Phono	Voltage 150 mV Impedance 1 kohms
SPEAKERS	———	**Model for Scandinavian countries, Spain and Portgul** Accepts speakers of 6 – 16 ohms. **Models for other countries** Accepts speakers of 4 – 16 ohms
HEAD-PHONES	Stereo phone	Accepts low and high impedance headphones.

Loudness (Attenuation 30 dB)
+6 dB (100 Hz)/+3 dB (10 kHz)

Subsonic filter 6 dB/octave, attenuation below 15Hz

Intermodulation (IM) distortion (60 Hz: 7 kHz=4: 1)
Less than 0.05% at rated output

Frequency response PHONE: RIAA equalization curve ± 0.5 dB
TUNER, CD, AUX, TAPE1/DAT:
7 Hz – 100 kHz ± 3 dB

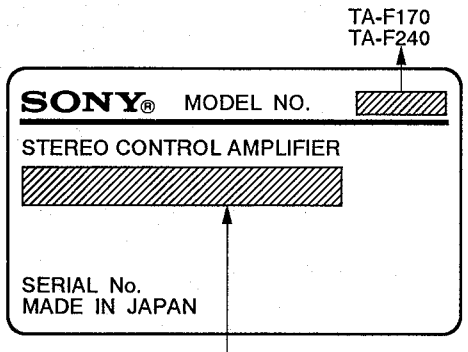
Residual noise Less than 190 μV (network A)

Dampong factor 40 (8 ohms, 1 kHz)

Power requirements AEP, Germany models:
220 – 230 V AC, 50 Hz
UK model: 240 V AC, 50 Hz
E model: 120 V,
220 V or 240 V AC adjustable, 50/60 Hz

MODEL IDENTIFICATION

– Specification Labels –



AEP, Germany model: AC: 220 – 230 V~50/60Hz 90 W
TA-F170 UK model: AC: 240 V ~50/60 Hz 250 W
TA-F240 UK model: AC: 240 V ~50/60 Hz 380 W
E model: AC: 120/220/240 V ~50/60 Hz 90 W

Power consumption

Models for	F170	F240
UK	250 W	380 W
Germany	95 W	—
AEP, E	90 W	—

Dimensions Approx. 430 × 135 × 312 mm (w/h/d) (17 × 5⅜ × 12⅜ inches)

Weight TA-F170: Approx. 7.6 kg (16 lb 12 oz)
TA-F240: Approx. 8 kg (17 lb 10 oz)

* For all the countries except U.K. and Canada, the above values are measured at 230 V AC.

Design and specifications subject to change without notice.

Note
This appliance conforms with EEC directive 87/308/EEC regarding interference suppression.

TABLE OF CONTENTS

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Precautions ····· 3

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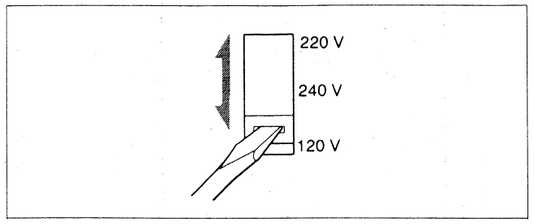
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

Precautions



On safety

- Before operating the unit, check that the operating voltage of your unit is identical with the voltage of your local power supply.

Where purchased	Operating voltage
Canada	120 V AC
United Kingdom	240 V AC
Continental European countries	220 – 230 V AC
Other countries	120 V, 220 V or 240 V AC adjustable The voltage selector is located on the rear panel. If the selector must be reset, disconnect the AC power cord and set the selector to the proper voltage of your local power supply.

- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.
- Should any solid object or liquid fall into the unit, unplug the unit and have it checked by qualified personnel before operating it any further.
- Do not block the ventilation holes on top of the unit. The ventilation holes must be unobstructed for proper operation of the unit and to prolong the life of its components.
- AC power cord must be changed only at the qualified service shop.

On cleaning the cabinet

Clean the cabinet, panels and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

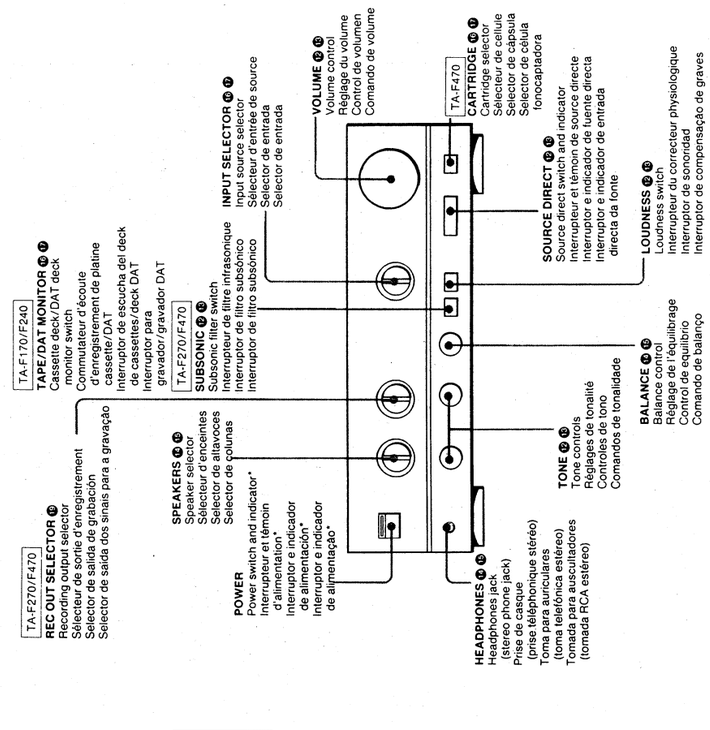
On repacking

Do not throw away the carton and the packing material. This makes an ideal container when transporting the unit. When shipping the unit, repack it as it was packed at the factory.

If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

Parts Identification/Identification des parties Identificación de partes/Identificacao dos comandos

Refer to the pages indicated in ● for details.
Pour les détails, se reporter aux pages indiquées dans les cercles noirs.
Para los detalles, refiérase a las páginas indicadas en ●.
Consulte as páginas indicadas nas ● para mais pormenores.



Connections

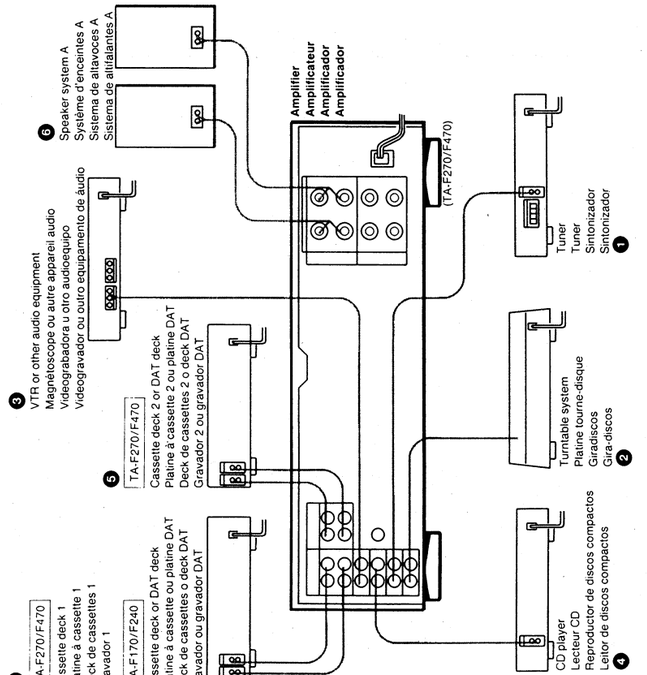
Notes on Connection

- Connect the AC power cord last. Make sure power is off.
- Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for left channel (L).
- Fully insert cable connectors into jacks. Loose connections may cause hum or noise.

Connexions

Remarques sur les connexions

- Le cordon d'alimentation doit être branché en dernier lieu, après s'être assuré que l'appareil est bien hors tension.
- Les fiches des cordons et les prises sont codées par couleur. Les fiches et prises rouges sont destinées au canal droit (R) et les blanches, au canal gauche (L).
- Insérer les connecteurs des câbles à fond dans les prises. En effet, une connexion relâchée peut provoquer un ronflement ou du bruit.



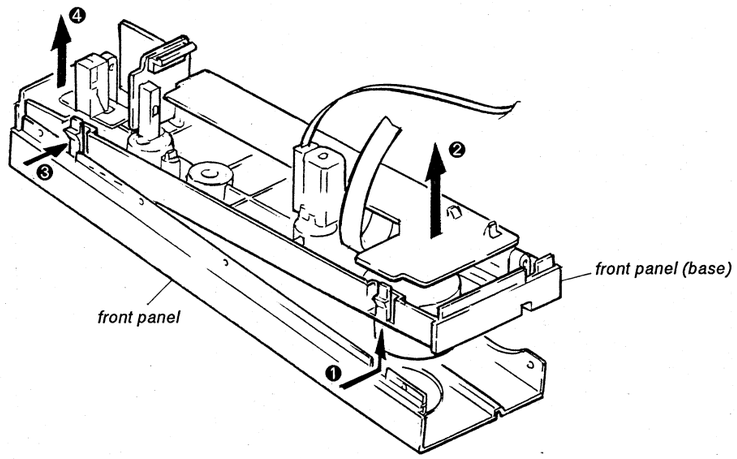
SECTION 1
GENERAL

This section is extracted from TA-F170/ F240/F270/F470 instruction manual.

SECTION 2
DISASSEMBLY

2-1. DISASSEMBLY OF FRONT PANEL

Note: Follow the disassembly procedure in the numerical order given.



SECTION 3
ELECTRICAL ADJUSTMENT

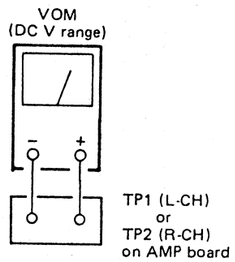
NOTE:

- Adjustment should be performed 10 minutes after the POWER switch is on (POWER ON).

Bias Current Adjustment

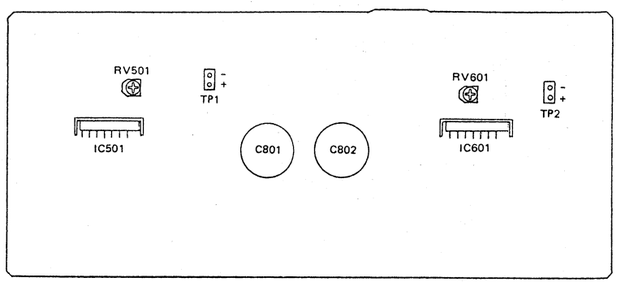
Setting:

VOLUME control: minimum



Adjustment Location:

[AMP BOARD] – Component Side –

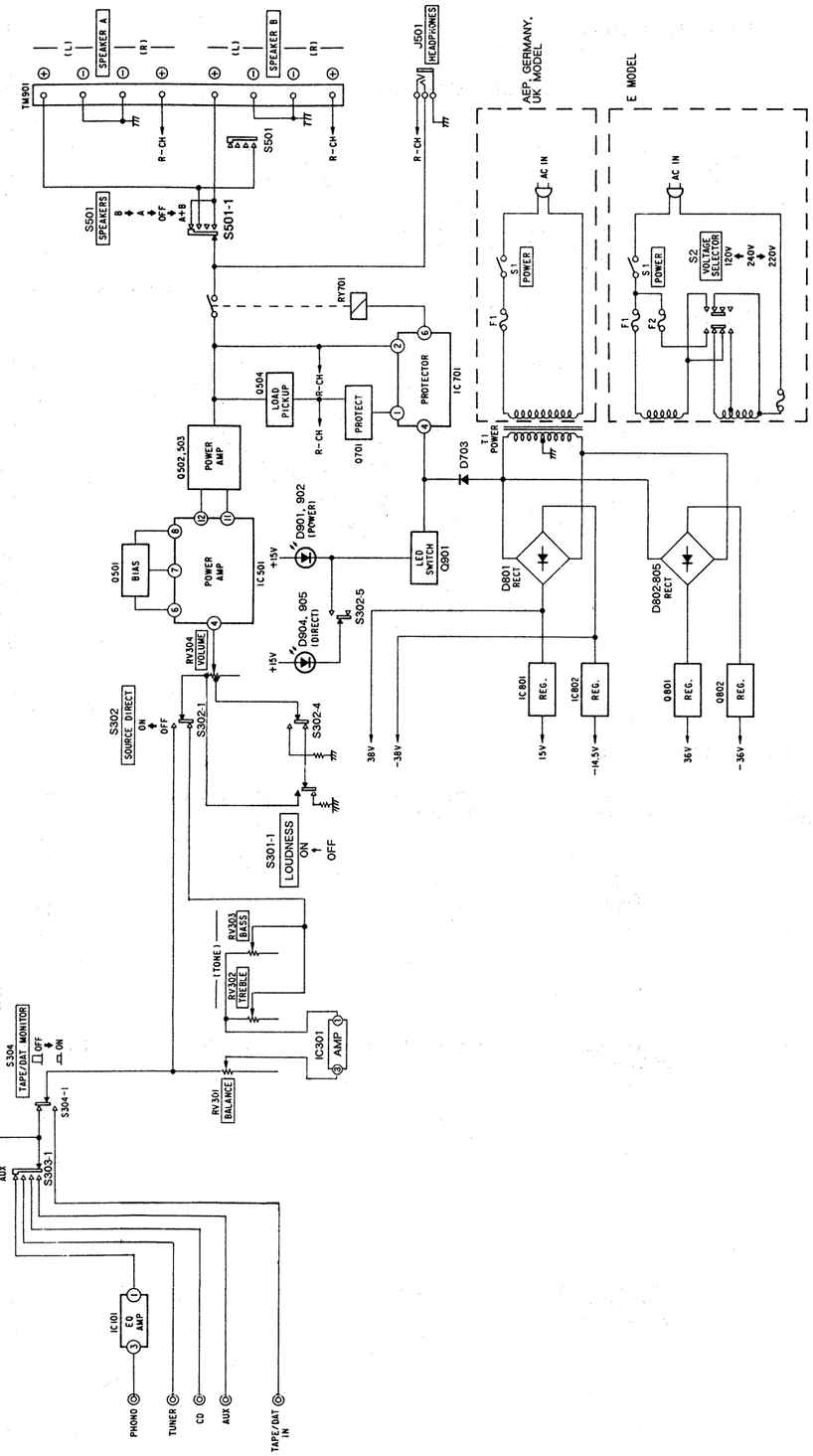


Procedure:

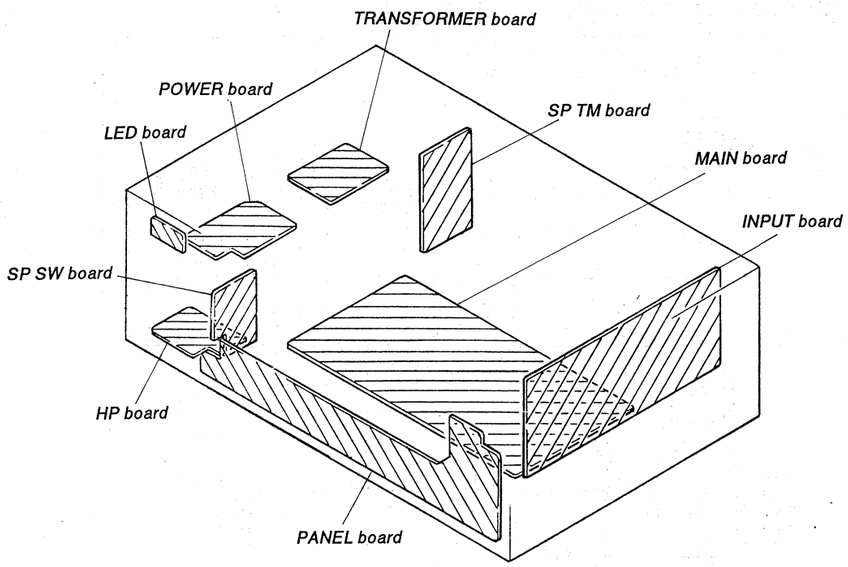
Adjust RV501 (L-CH) and RV601 (R-CH) so as to obtain 4 mV (TA-F120) or 2 mV (TA-F220) at TP1 (L-CH) and TP2 (R-CH) respectively.

4-1. BLOCK DIAGRAM

SECTION 4
DIAGRAM



• Circuit Boards Location



• Semiconductor Location

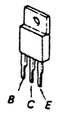
Ref. No.	Location
D501	B-15
D502	B-15
D601	B-11
D602	B-11
D701	D-14
D702	E-14
D703	E-12
D801	E-10
D802	E-13
D803	E-13
D804	F-13
D805	F-13
D901	H-15
D902	H-15
D904	K-8
D905	K-8
IC101	F-4
IC301	J-14
IC501	C-15
IC601	D-9
IC701	D-14
IC801	D-7
IC802	D-8
Q501	A-13
Q502	A-14
Q503	A-12
Q504	B-15
Q601	A-9
Q602	A-10
Q603	A-8
Q604	B-11
Q701	D-14
Q801	E-15
Q802	F-15
Q901	E-15

• Semiconductor Lead Layouts

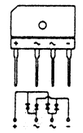
M5218AL
μPC1237HA

μPC1298V
μPC1342V

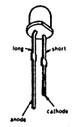
2SB1370-EF
2SD2012



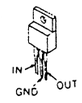
RBV-602-01



SEL2510C-C



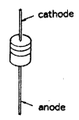
TA7815S



DTA124ES
2SC2603-EF

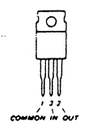
2SC1841-PAFAEA

1SS120



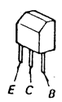
SEL2810A-C

TA7915S

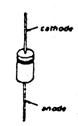


2SA1490-OPY
2SA1491-OY
2SC3854-OY
2SC3855-OY

2SD1312-K

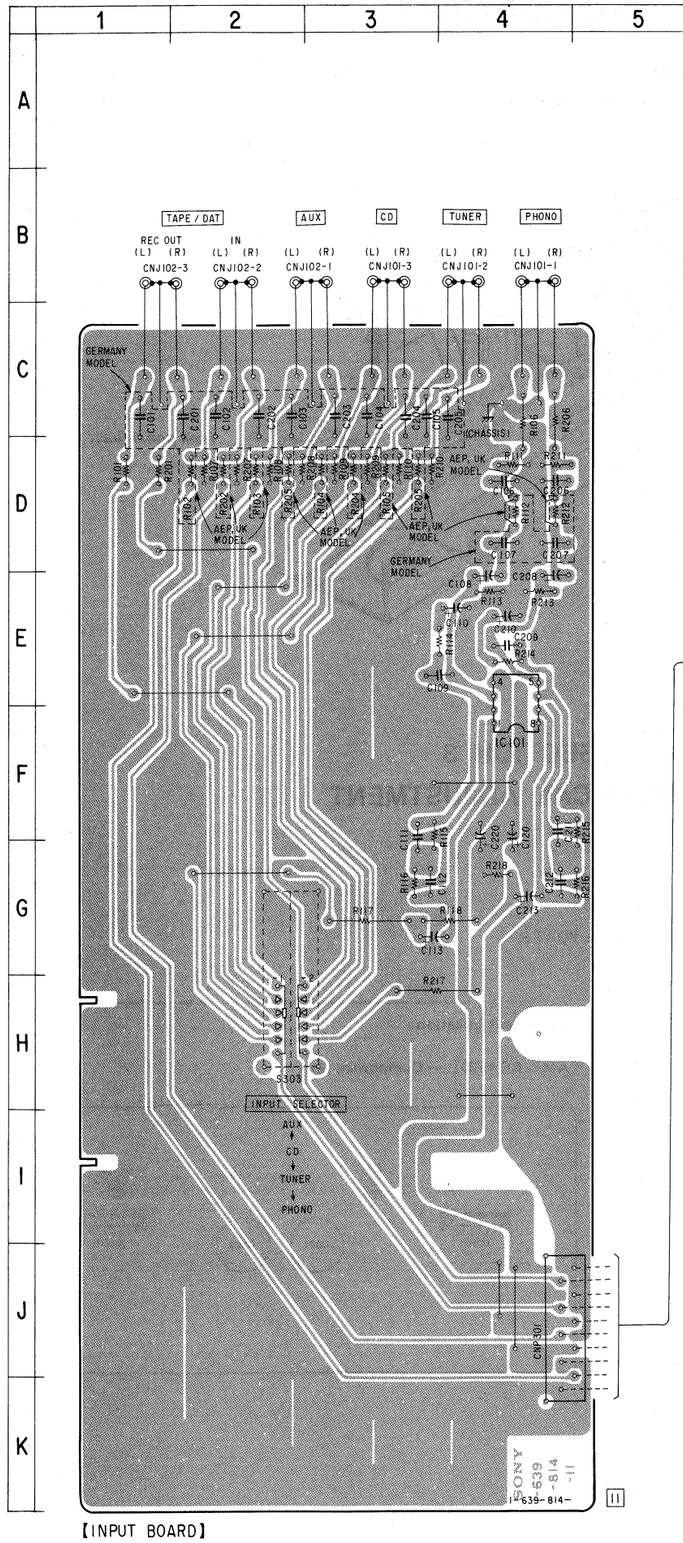


10E2

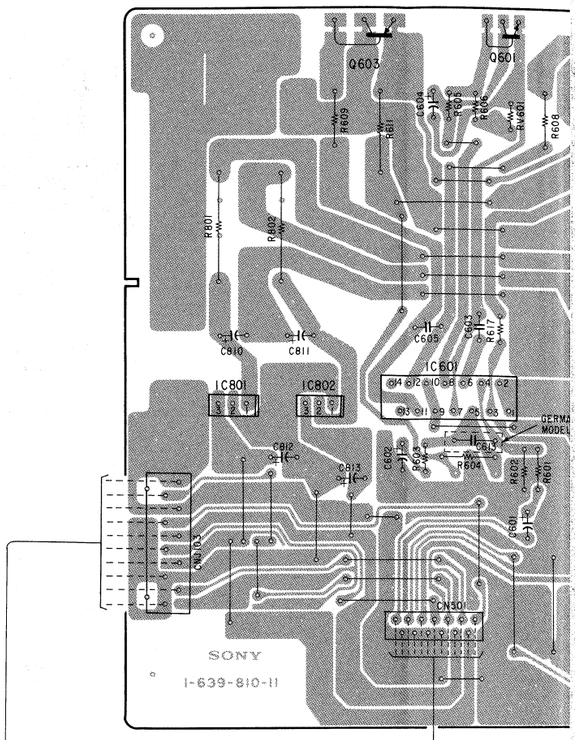


4-2. PRINTED WIRING BOARDS

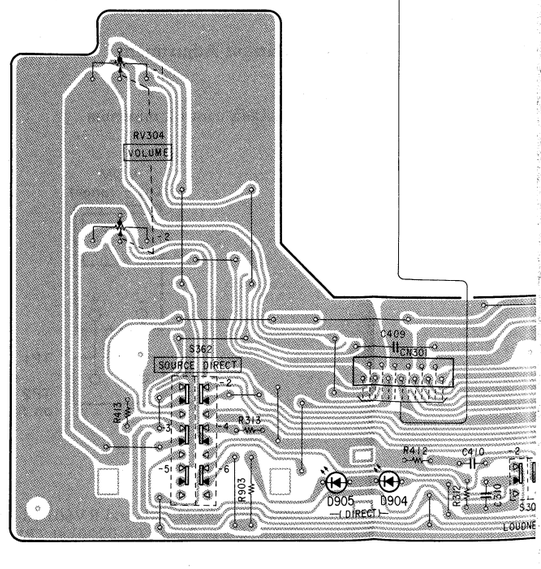
【INPUT BOARD】



【MAIN BOARD】



【PANEL BOARD】



【SP TM BOARD】

【TRANSFORMER BOARD】

【HP BOARD】

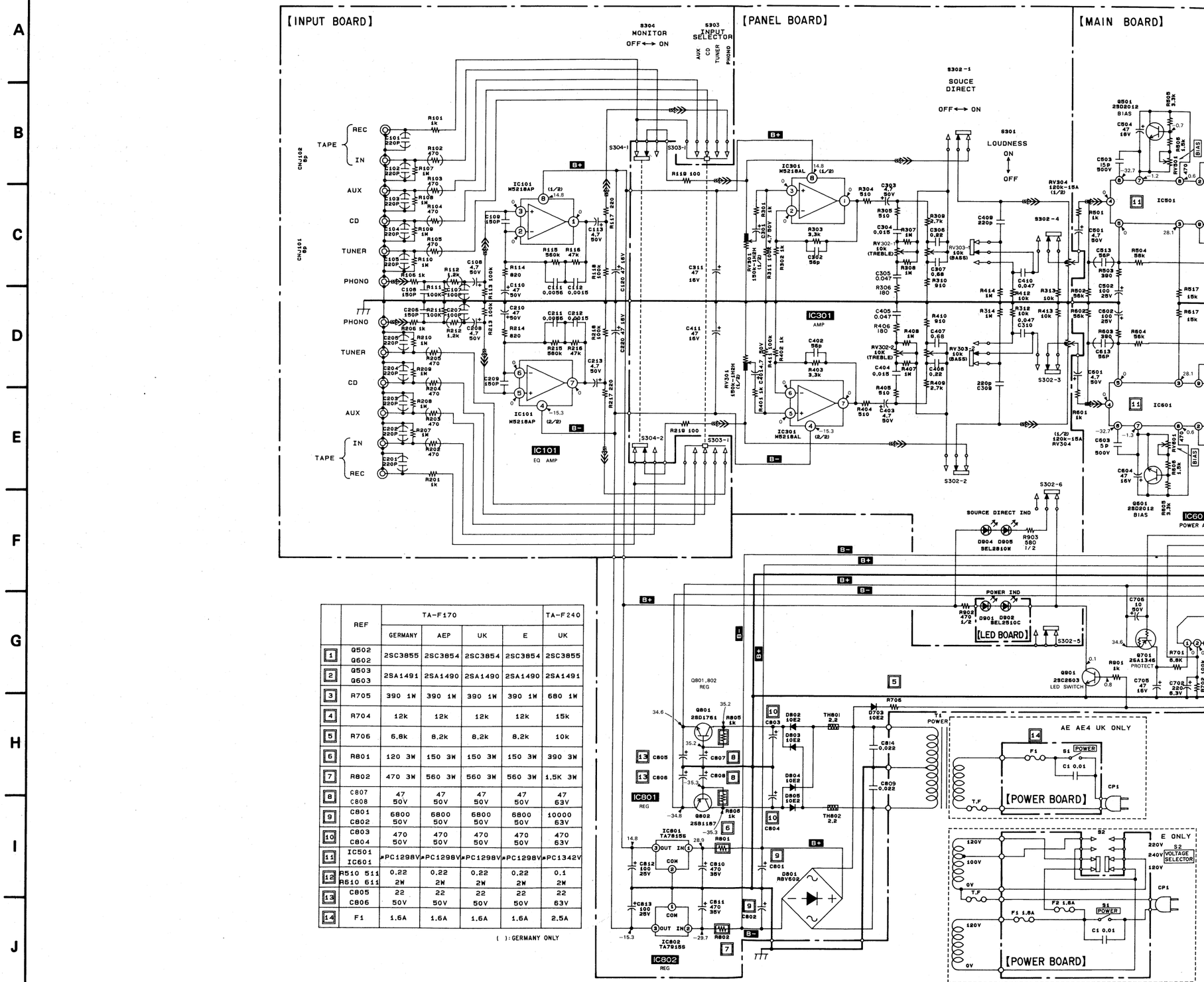
【SP SW BOARD】

【LED BOARD】

【POWER BOARD】

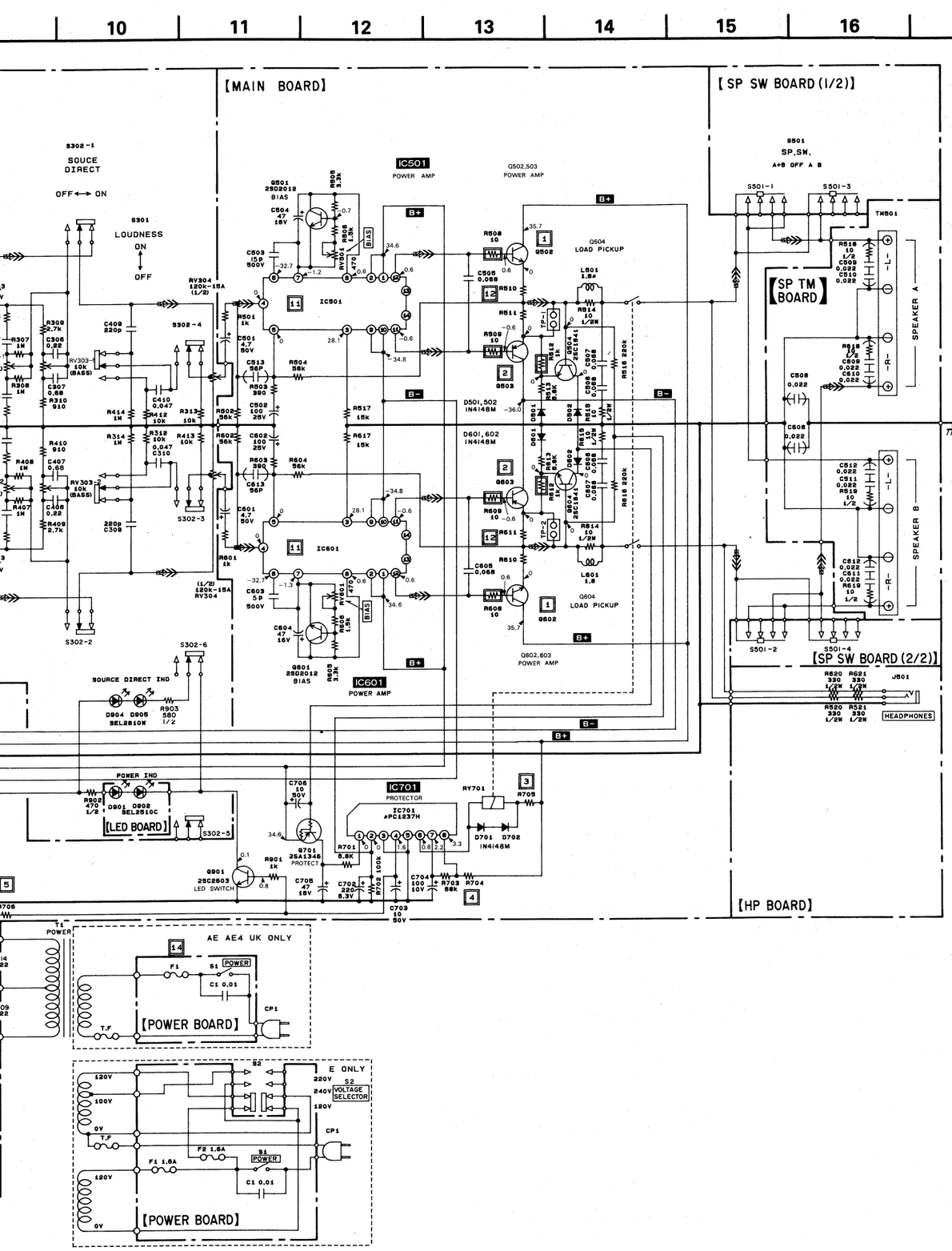
Note:
• ○—— : parts extracted from the component side.

4-3. SCHEMATIC DIAGRAM



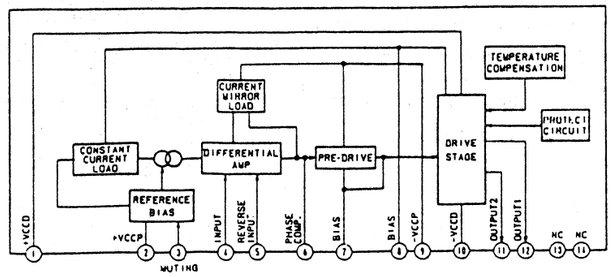
	REF	TA-F170				TA-F240
		GERMANY	AEP	UK	E	UK
1	Q502 Q602	2SC3855	2SC3854	2SC3854	2SC3854	2SC3855
2	Q503 Q603	2SA1491	2SA1490	2SA1490	2SA1490	2SA1491
3	R705	390 1W	390 1W	390 1W	390 1W	680 1W
4	R704	12k	12k	12k	12k	15k
5	R706	6.8k	8.2k	8.2k	8.2k	10k
6	R801	120 3W	150 3W	150 3W	150 3W	390 3W
7	R802	470 3W	560 3W	560 3W	560 3W	1.5K 3W
8	C807 C808	47 50V	47 50V	47 50V	47 50V	47 63V
9	C801 C802	6800 50V	6800 50V	6800 50V	6800 50V	10000 63V
10	C803 C804	470 50V	470 50V	470 50V	470 50V	470 63V
11	IC501 IC601	μPC1298V	μPC1298V	μPC1298V	μPC1298V	μPC1342V
12	R510 511 R610 611	0.22 2W	0.22 2W	0.22 2W	0.22 2W	0.1 2W
13	C805 C806	22 50V	22 50V	22 50V	22 50V	22 63V
14	F1	1.6A	1.6A	1.6A	1.6A	2.5A

( ):GERMANY ONLY

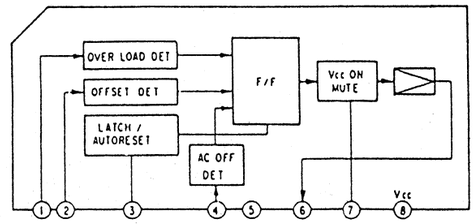


• IC Block Diagrams

IC501, 601 μPC1298V



IC701 μPC1237HA



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ⊣▭⊢ : nonflammable resistor.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B + Line.
- B− : B − Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⋙ : PHONO

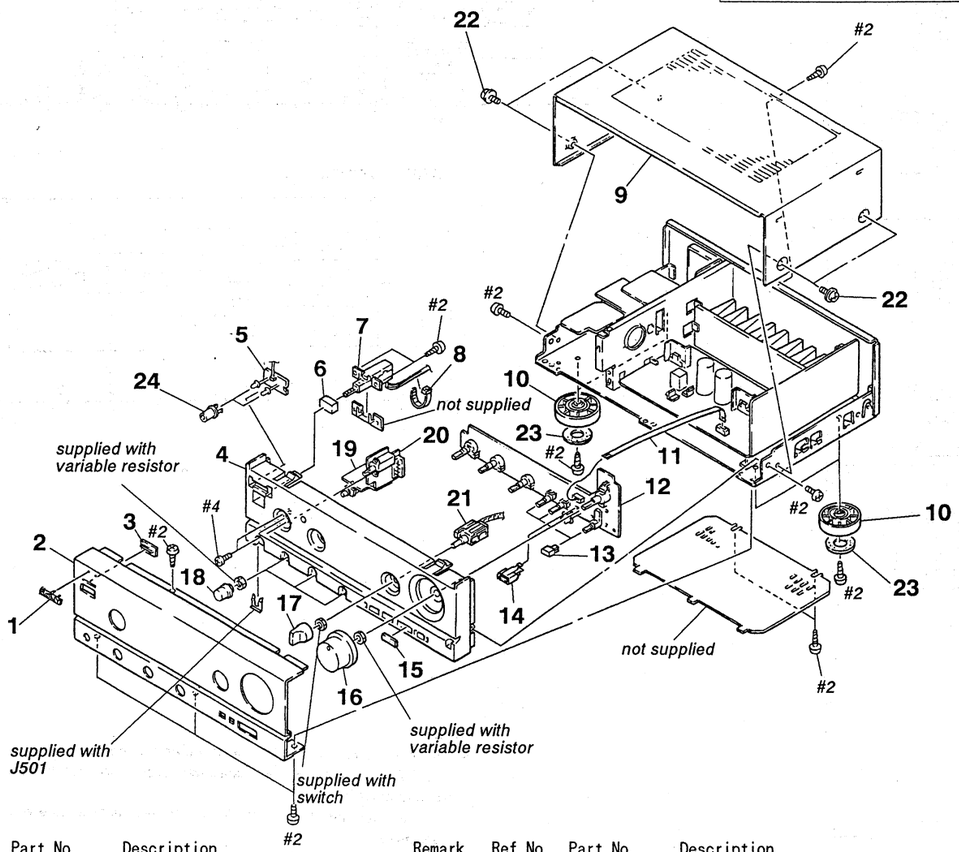
SECTION 5
EXPLODED VIEWS

NOTE:

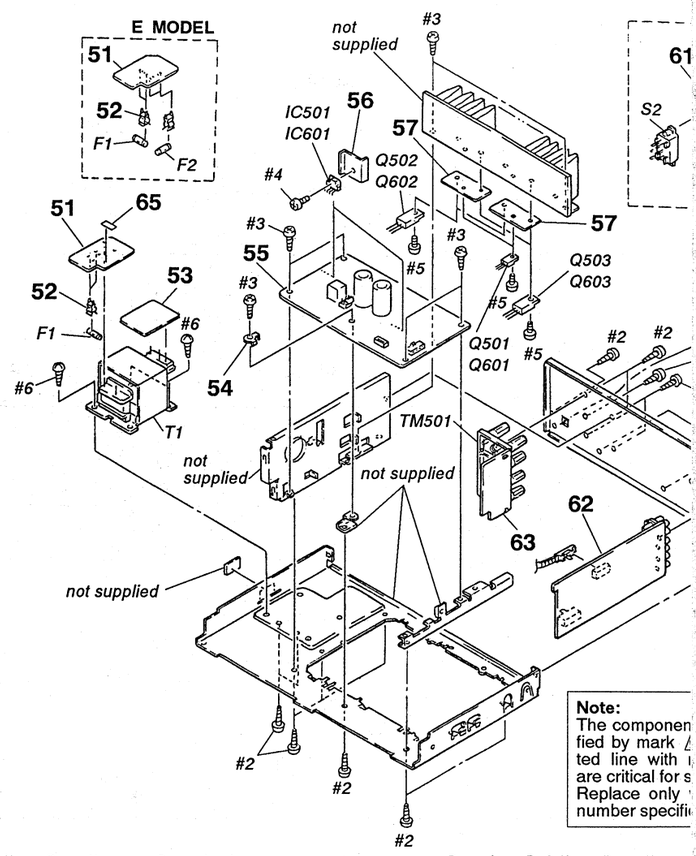
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

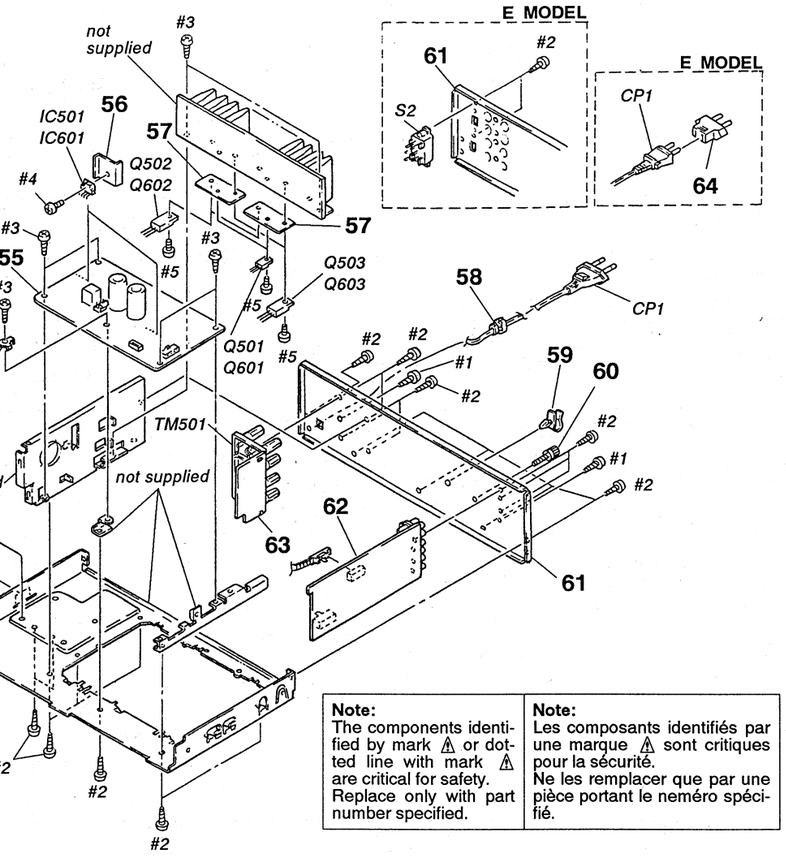
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.



Ref. No.	Part No.	Description	Remark
1	4-908-848-01	EMBLEM, SONY	
2	4-945-182-01	PANEL, FRONT (F170)	
2	4-945-182-11	PANEL, FRONT (F240)	
3	4-945-175-01	INDICATOR (PSW)	
4	* 4-945-181-01	PANEL (BASE), FRONT	
5	* 1-639-817-11	LED BOARD	
6	4-929-289-01	BUTTON	
7	1-553-318-41	SWITCH, PUSH (AC POWER) (1 KEY)	
8	3-655-653-21	BAND (TAITON), BINDING (F170:AEP, UK, GERMANY/F240)	
9	4-929-294-11	CASE	
10	X-3304-938-2	FOOT ASSY	
11	1-590-036-11	WIRE, FLAT TYPE (13 CORE)	
12	* A-4345-123-A	PANEL BOARD, COMPLETE (F240)	
12	* A-4345-133-A	PANEL BOARD, COMPLETE (F170)	
13	4-945-176-01	BUTTON (18X11)	
14	4-945-177-01	HOUSE, LIGHTING	
15	4-945-622-01	PLATE (S/D), INDICATION	
16	X-4941-616-1	KNOB (R53) ASSY	
17	4-945-173-01	KNOB (R21)	
18	4-945-174-01	KNOB (F25)	
19	* 1-639-812-11	H.P BOARD	
20	* 1-639-811-11	SP SW BOARD	
21	1-572-803-11	SWITCH, ROTARY SLIDE (INPUT SELECTOR)	
22	3-704-366-01	SCREW (CASE) (M3X8)	
23	4-923-836-11	CUSHION	
24	* 3-362-478-21	HOLDER (T), LED	



Ref. No.	Part No.	Description	Remark
51	* 1-639-816-11	POWER BOARD	
52	* 1-533-225-11	HOLDER, FUSE	
53	* 1-639-818-11	TRANSFORMER BOARD	
54	* 4-942-204-01	PLATE, GROUND	
55	* A-4345-128-A	MAIN BOARD, COMPLETE (F240)	
55	* A-4345-138-A	MAIN BOARD, COMPLETE (F170:AEP, UK)	
55	* A-4345-143-A	MAIN BOARD, COMPLETE (F170:GERMANY)	
55	* A-4345-154-A	MAIN BOARD, COMPLETE (F170:E)	
56	* 4-931-998-11	HEAT SINK (S) (F170)	
56	* 4-931-998-21	HEAT SINK (S) (F240)	
57	4-945-480-01	SHEET, INSULATING	
58	* 3-703-571-11	BUSHING (S) (4516), CORD (F170:E)	
58	* 3-703-244-00	BUSHING (2104), CORD	
59	* 2-379-614-01	HOOK	
60	3-706-165-00	SCREW	
61	* 4-941-986-41	PANEL, BACK (F170:E)	
61	* 4-941-986-51	PANEL, BACK (F240)	
61	* 4-944-986-		
61	* 4-944-986-		
61	* 4-944-986-		
62	* 1-639-814-		
63	* 1-639-813-		
64	⚠ 1-569-007-		
65	3-701-947-		
CP1	⚠ 1-575-651-		
CP1	⚠ 1-575-652-		
CP1	⚠ 1-575-653-		
F1	⚠ 1-532-286-		
F1	⚠ 1-532-259-		
F2	⚠ 1-532-259-		
S2	⚠ 1-570-307-		
T1	⚠ 1-450-575-		
T1	⚠ 1-450-576-		
T1	⚠ 1-450-577-		
T1	⚠ 1-450-578-		
T1	⚠ 1-450-579-		



Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

n	Remark
D	
SE	
R BOARD	
UND	
, COMPLETE (F240)	
, COMPLETE (F170:AEP,UK)	
, COMPLETE (F170:GERMANY)	
, COMPLETE (F170:E)	
(S) (F170)	
(S) (F240)	
ULATING	
) (4516), CORD (F170:E)	
104), CORD	
K (F170:E)	
K (F240)	

Ref.No.	Part No.	Description	Remark
61	* 4-944-986-11	PANEL, BACK (F170:AEP)	
61	* 4-944-986-21	PANEL, BACK (F170:GERMANY)	
61	* 4-944-986-31	PANEL, BACK (F170:UK)	
62	* 1-639-814-11	INPUT BOARD	
63	* 1-639-813-11	SP TM BOARD	
64	⚠· 1-569-007-11	ADAPTOR, CONVERSION 2P (F170:E)	
65	3-701-947-15	LABEL (2.5A), FUSE (F240)	
CP1	⚠· 1-575-651-11	CORD, POWER (AEP,GERMANY)	
CP1	⚠· 1-575-652-11	CORD, POWER (UK)	
CP1	⚠· 1-575-653-11	CORD, POWER (E)	
F1	⚠· 1-532-286-00	FUSE (F240)	
F1	⚠· 1-532-259-00	FUSE (F170)	
F2	⚠· 1-532-259-00	FUSE (F170:E)	
S2	⚠· 1-570-307-11	SWITCH, VOLTAGE CHANGE (F170:E)	
T1	⚠· 1-450-575-11	TRANSFORMER, POWER (F240)	
T1	⚠· 1-450-576-11	TRANSFORMER, POWER (F170:AEP)	
T1	⚠· 1-450-577-11	TRANSFORMER, POWER (F170:GERMANY)	
T1	⚠· 1-450-578-11	TRANSFORMER, POWER (F170:UK)	
T1	⚠· 1-450-579-11	TRANSFORMER, POWER (F170:E)	

SECTION 6
ELECTRICAL PARTS LIST

MAIN **SP SW** **H. P** **SP TM** **INPUT**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

When including parts by reference number, please include the board name.

Ref.No.	Part No.	Description	Remark
	* A-4345-128-A	MAIN BOARD, COMPLETE (F240)	
	* A-4345-138-A	MAIN BOARD, COMPLETE (F170:AEP,UK)	
	* A-4345-143-A	MAIN BOARD, COMPLETE (F170:GERMANY)	
	* A-4345-154-A	MAIN BOARD, COMPLETE (F170:E)	
		**********	
	* 1-639-811-11	SP SW BOARD	
		**********	
	* 1-639-812-11	H. P. BOARD	
		**********	
	* 1-639-813-11	SP TM BOARD	
		**********	
	* 1-639-814-11	INPUT BOARD	
		**********	
	* 4-931-998-11	HEAT SINK (S) (F170)	
	* 4-931-998-21	HEAT SINK (S) (F240)	
	* 4-942-204-01	PLATE, GROUND	
	7-682-548-04	SCREW +BVTT 3X8 (S)	
		< CAPACITOR >	
C101	1-162-286-31	CERAMIC 220PF 10% 50V (F170:GERMANY)	
C102	1-162-286-31	CERAMIC 220PF 10% 50V (F170:GERMANY)	
C103	1-162-286-31	CERAMIC 220PF 10% 50V (F170:GERMANY)	
C104	1-162-286-31	CERAMIC 220PF 10% 50V (F170:GERMANY)	
C105	1-162-286-31	CERAMIC 220PF 10% 50V (F170:GERMANY)	
C106	1-164-075-11	CERAMIC 150PF 10% 50V	
C107	1-164-070-11	CERAMIC 100PF 5% 50V (F170:GERMANY)	
C108	1-126-163-11	ELECT 4.7uF 20% 50V	
C109	1-164-075-11	CERAMIC 150PF 10% 50V	
C110	1-126-051-11	ELECT 47uF 20% 50V	
C111	1-130-480-00	MYLAR 0.0056uF 5% 50V	
C112	1-130-473-00	MYLAR 0.0015uF 5% 50V	
C113	1-126-163-11	ELECT 4.7uF 20% 50V	
C120	1-126-022-11	ELECT 47uF 20% 16V	
C201	1-162-286-31	CERAMIC 220PF 10% 50V (F170:GERMANY)	
C202	1-162-286-31	CERAMIC 220PF 10% 50V (F170:GERMANY)	
C203	1-162-286-31	CERAMIC 220PF 10% 50V (F170:GERMANY)	
C204	1-162-286-31	CERAMIC 220PF 10% 50V (F170:GERMANY)	
C205	1-162-286-31	CERAMIC 220PF 10% 50V (F170:GERMANY)	
C206	1-164-075-11	CERAMIC 150PF 10% 50V	
C207	1-164-070-11	CERAMIC 100PF 5% 50V (F170:GERMANY)	
C208	1-126-163-11	ELECT 4.7uF 20% 50V	
C209	1-164-075-11	CERAMIC 150PF 10% 50V	
C210	1-126-051-11	ELECT 47uF 20% 50V	
C211	1-130-480-00	MYLAR 0.0056uF 5% 50V	
C212	1-130-473-00	MYLAR 0.0015uF 5% 50V	
C213	1-126-163-11	ELECT 4.7uF 20% 50V	
C220	1-126-022-11	ELECT 47uF 20% 16V	
C501	1-126-163-11	ELECT 4.7uF 20% 50V	
C502	1-126-023-11	ELECT 100uF 20% 25V	
C503	1-102-316-00	CERAMIC 15PF 5% 500V	
C504	1-126-022-11	ELECT 47uF 20% 16V	
C505	1-136-163-00	FILM 0.068uF 5% 50V	
C506	1-136-163-00	FILM 0.068uF 5% 50V	
C507	1-136-163-00	FILM 0.068uF 5% 50V	
C508	1-136-157-00	FILM 0.022uF 5% 50V (F170:GERMANY)	
C509	1-136-157-00	FILM 0.022uF 5% 50V (F170:GERMANY)	
C510	1-136-157-00	FILM 0.022uF 5% 50V (F170:GERMANY)	
C511	1-136-157-00	FILM 0.022uF 5% 50V (F170:GERMANY)	
C512	1-136-157-00	FILM 0.022uF 5% 50V (F170:GERMANY)	
C513	1-162-217-11	CERAMIC 56PF (F170:GERMANY)	
C601	1-126-163-11	ELECT 4.7uF 20% 50V	
C602	1-126-023-11	ELECT 100uF 20% 25V	
C603	1-102-316-00	CERAMIC 15PF 5% 500V	
C604	1-126-022-11	ELECT 47uF 20% 16V	
C605	1-136-163-00	FILM 0.068uF 5% 50V	
C606	1-136-163-00	FILM 0.068uF 5% 50V	
C607	1-136-163-00	FILM 0.068uF 5% 50V	
C608	1-136-157-00	FILM 0.022uF 5% 50V (F170:GERMANY)	
C609	1-136-157-00	FILM 0.022uF 5% 50V (F170:GERMANY)	
C610	1-136-157-00	FILM 0.022uF 5% 50V (F170:GERMANY)	
C611	1-136-157-00	FILM 0.022uF 5% 50V (F170:GERMANY)	
C612	1-136-157-00	FILM 0.022uF 5% 50V (F170:GERMANY)	
C613	1-162-217-11	CERAMIC 56PF (F170:GERMANY)	
C702	1-124-982-81	ELECT 220uF 20% 6.3V	
C703	1-126-059-11	ELECT 10uF 20% 50V	
C704	1-124-994-11	ELECT 100uF 20% 10V	
C705	1-126-022-11	ELECT 47uF 20% 16V	
C706	1-126-059-11	ELECT 10uF 20% 50V	
C801	1-125-686-11	ELECT 6800uF 20% 50V (F170)	
C801	1-128-342-11	ELECT 10000uF 20% 63V (F240)	
C802	1-125-686-11	ELECT 6800uF 20% 50V (F170)	
C802	1-128-342-11	ELECT 10000uF 20% 63V (F240)	
C803	1-124-921-11	ELECT 470uF 20% 63V (F240)	
C803	1-126-055-11	ELECT 470uF 20% 50V (F170)	
C804	1-124-921-11	ELECT 470uF 20% 63V (F240)	
C804	1-126-055-11	ELECT 470uF 20% 50V (F170)	
C805	1-124-916-11	ELECT 22uF 20% 63V (F240)	
C805	1-126-049-11	ELECT 22uF 20% 50V (F170)	
C806	1-124-916-11	ELECT 22uF 20% 63V (F240)	
C806	1-126-049-11	ELECT 22uF 20% 50V (F170)	

MAIN | SP SW | H. P | SP TM | INPUT

Ref. No.	Part No.	Description				Remark
C807	1-126-051-11	ELECT	47uF	20%	50V (F170)	
C807	1-126-062-11	ELECT	47uF	20%	63V (F240)	
C808	1-126-051-11	ELECT	47uF	20%	50V (F170)	
C808	1-126-062-11	ELECT	47uF	20%	63V (F240)	
C809	1-106-375-12	MYLAR	0.022uF	5%	200V	
C810	1-126-104-11	ELECT	470uF	20%	35V	
C811	1-126-104-11	ELECT	470uF	20%	35V	
C812	1-126-023-11	ELECT	100uF	20%	25V	
C813	1-126-023-11	ELECT	100uF	20%	25V	
C814	1-106-375-12	MYLAR	0.022uF	5%	200V	
		< CONNECTOR >				
CN501	* 1-568-832-11	SOCKET, CONNECTOR 13P				
CNJ101	* 1-566-883-61	JACK, PIN 6P				
CNJ102	* 1-566-883-51	JACK, PIN 6P				
CNJ103	? 1-573-299-11	CONNECTOR, BOARD TO BOARD 10P				
CNP301	? 1-573-296-11	CONNECTOR, BOARD TO BOARD 10P				
CNP502	* 1-564-243-00	PIN, CONNECTOR 6P				
CNP503	* 1-506-599-11	PIN, CONNECTOR 10P				
CNP505	* 1-564-241-00	PIN, CONNECTOR 4P				
CNP801	* 1-564-104-00	PIN, CONNECTOR 3P				
		< DIODE >				
D501	8-719-912-20	DIODE 1SS120				
D502	8-719-912-20	DIODE 1SS120				
D601	8-719-912-20	DIODE 1SS120				
D602	8-719-912-20	DIODE 1SS120				
D701	8-719-912-20	DIODE 1SS120				
D702	8-719-912-20	DIODE 1SS120				
D703	8-719-200-77	DIODE 10E2N				
D801	8-719-302-38	DIODE RBV-602-01				
D802	8-719-200-77	DIODE 10E2N				
D803	8-719-200-77	DIODE 10E2N				
D804	8-719-200-77	DIODE 10E2N				
D805	8-719-200-77	DIODE 10E2N				
		< IC >				
IC101	8-759-636-74	IC M5218AP-22				
IC501	8-759-109-06	IC uPC1298V (F170)				
IC501	8-759-144-04	IC uPC1342V (F240)				
IC601	8-759-109-06	IC uPC1298V (F170)				
IC601	8-759-144-04	IC uPC1342V (F240)				
IC701	8-759-111-68	IC uPC1237HA				
IC801	8-759-231-59	IC TA7815S				
IC802	8-759-245-87	IC TA7915S				
		< JACK >				
J501	1-507-796-71	JACK (HEADPHONES)				

Ref. No.	Part No.	Description				Remark
		< COIL >				
L501	* 1-420-872-00	COIL, AIR CORE				
L601	* 1-420-872-00	COIL, AIR CORE				
		< TRANSISTOR >				
Q501	8-729-209-15	TRANSISTOR 2SD2012				
Q502	8-729-320-83	TRANSISTOR 2SC3855-OY				(F170:GERMANY/F240)
Q502	8-729-321-96	TRANSISTOR 2SC3854-OY				(F170:AEP, UK, E)
Q503	8-729-320-86	TRANSISTOR 2SA1491-OY				(F170:GERMANY/F240)
Q503	8-729-322-02	TRANSISTOR 2SA1490-OPY				(F170:AEP, UK, E)
Q504	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA				
Q601	8-729-209-15	TRANSISTOR 2SD2012				
Q602	8-729-320-83	TRANSISTOR 2SC3855-OY				(F170:GERMANY/F240)
Q602	8-729-321-96	TRANSISTOR 2SC3854-OY				(F170:AEP, UK, E)
Q603	8-729-320-86	TRANSISTOR 2SA1491-OY				(F170:GERMANY/F240)
Q603	8-729-322-02	TRANSISTOR 2SA1490-OPY				(F170:AEP, UK, E)
Q604	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA				
Q701	8-729-900-63	TRANSISTOR DTA124ES				
Q801	8-729-111-55	TRANSISTOR 2SD1312-K				
Q802	8-729-924-90	TRANSISTOR 2SB1370-EF				
Q901	8-729-620-05	TRANSISTOR 2SC2603-EF				
		< RESISTOR >				
R101	1-249-417-11	CARBON	1K	5%	1/4W	
R102	1-249-413-11	CARBON	470	5%	1/4W	(F170:GERMANY)
R103	1-249-413-11	CARBON	470	5%	1/4W	(F170:GERMANY)
R104	1-249-413-11	CARBON	470	5%	1/4W	(F170:GERMANY)
R105	1-249-413-11	CARBON	470	5%	1/4W	(F170:GERMANY)
R106	1-249-417-11	CARBON	1K	5%	1/4W	
R107	1-247-903-00	CARBON	1M	5%	1/4W	
R108	1-247-903-00	CARBON	1M	5%	1/4W	
R109	1-247-903-00	CARBON	1M	5%	1/4W	
R110	1-247-903-00	CARBON	1M	5%	1/4W	
R111	1-249-441-11	CARBON	100K	5%	1/4W	
R112	1-249-418-11	CARBON	1.2K	5%	1/4W	(F170:GERMANY)
R113	1-249-441-11	CARBON	100K	5%	1/4W	
R114	1-249-416-11	CARBON	820	5%	1/4W	
R115	1-247-897-11	CARBON	560K	5%	1/4W	
R116	1-249-437-11	CARBON	47K	5%	1/4W	
R117	1-249-409-11	CARBON	220	5%	1/4W	
R118	1-249-441-11	CARBON	100K	5%	1/4W	
R201	1-249-417-11	CARBON	1K	5%	1/4W	
R202	1-249-413-11	CARBON	470	5%	1/4W	(F170:GERMANY)
R203	1-249-413-11	CARBON	470	5%	1/4W	(F170:GERMANY)
R204	1-249-413-11	CARBON	470	5%	1/4W	(F170:GERMANY)
R205	1-249-413-11	CARBON	470	5%	1/4W	(F170:GERMANY)
R206	1-249-417-11	CARBON	1K	5%	1/4W	

MAIN **SP SW** **H. P** **SP TM** **INPUT**

PANEL

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description	Remark
R207	1-247-903-00	CARBON 1M 5% 1/4W	
R208	1-247-903-00	CARBON 1M 5% 1/4W	
R209	1-247-903-00	CARBON 1M 5% 1/4W	
R210	1-247-903-00	CARBON 1M 5% 1/4W	
R211	1-249-441-11	CARBON 100K 5% 1/4W	
R212	1-249-418-11	CARBON 1.2K 5% 1/4W	(F170:GERMANY)
R213	1-249-441-11	CARBON 100K 5% 1/4W	
R214	1-249-416-11	CARBON 820 5% 1/4W	
R215	1-247-897-11	CARBON 560K 5% 1/4W	
R216	1-249-437-11	CARBON 47K 5% 1/4W	
R217	1-249-409-11	CARBON 220 5% 1/4W	
R218	1-249-441-11	CARBON 100K 5% 1/4W	
R501	1-249-417-11	CARBON 1K 5% 1/4W	
R502	1-249-438-11	CARBON 56K 5% 1/4W	
R503	1-249-412-11	CARBON 390 5% 1/4W	
R504	1-249-466-11	CARBON 56K 5% 1/4W	
R505	1-249-423-11	CARBON 3.3K 5% 1/4W	
R506	1-249-419-11	CARBON 1.5K 5% 1/4W	
R508	1-247-688-11	CARBON 10 5% 1/4W	
R509	1-247-688-11	CARBON 10 5% 1/4W	
R510 ⚠	1-216-361-00	METAL OXIDE 0.22 5% 2W F	(F170)
R510 ⚠	1-217-611-00	METAL OXIDE 0.1 10% 2W F	(F240)
R511 ⚠	1-216-361-00	METAL OXIDE 0.22 5% 2W F	(F170)
R511 ⚠	1-217-611-00	METAL OXIDE 0.1 10% 2W F	(F240)
R512	1-247-713-11	CARBON 1K 5% 1/4W	
R513	1-249-427-11	CARBON 6.8K 5% 1/4W	
R514	1-247-727-11	CARBON 10 5% 1/2W	
R515	1-247-727-11	CARBON 10 5% 1/2W	
R516	1-247-887-00	CARBON 220K 5% 1/4W	
R517	1-249-431-11	CARBON 15K 5% 1/4W	
R518	1-247-727-11	CARBON 10 5% 1/2W	(F170:GERMANY)
R519	1-247-727-11	CARBON 10 5% 1/2W	(F170:GERMANY)
R520	1-247-745-11	CARBON 330 5% 1/2W	
R521	1-247-745-11	CARBON 330 5% 1/2W	
R601	1-249-417-11	CARBON 1K 5% 1/4W	
R602	1-249-438-11	CARBON 56K 5% 1/4W	
R603	1-249-412-11	CARBON 390 5% 1/4W	
R604	1-249-466-11	CARBON 56K 5% 1/4W	
R605	1-249-423-11	CARBON 3.3K 5% 1/4W	
R606	1-249-419-11	CARBON 1.5K 5% 1/4W	
R608	1-247-688-11	CARBON 10 5% 1/4W	
R609	1-247-688-11	CARBON 10 5% 1/4W	
R610 ⚠	1-216-361-00	METAL OXIDE 0.22 5% 2W F	(F170)
R610 ⚠	1-217-611-00	METAL OXIDE 0.1 10% 2W F	(F240)
R611 ⚠	1-216-361-00	METAL OXIDE 0.22 5% 2W F	(F170)
R611 ⚠	1-217-611-00	METAL OXIDE 0.1 10% 2W F	(F240)
R612	1-247-713-11	CARBON 1K 5% 1/4W	
R613	1-249-427-11	CARBON 6.8K 5% 1/4W	
R614	1-247-727-11	CARBON 10 5% 1/2W	
R615	1-247-727-11	CARBON 10 5% 1/2W	
R616	1-247-887-00	CARBON 220K 5% 1/4W	
R617	1-249-431-11	CARBON 15K 5% 1/4W	
R618	1-247-727-11	CARBON 10 5% 1/2W	(F170:GERMANY)
R619	1-247-727-11	CARBON 10 5% 1/2W	(F170:GERMANY)
R620	1-247-745-11	CARBON 330 5% 1/2W	
R621	1-247-745-11	CARBON 330 5% 1/2W	
R701	1-249-427-11	CARBON 6.8K 5% 1/4W	
R702	1-249-441-11	CARBON 100K 5% 1/4W	
R703	1-249-439-11	CARBON 68K 5% 1/4W	
R704	1-249-430-11	CARBON 12K 5% 1/4W	(F170)
R704	1-249-431-11	CARBON 15K 5% 1/4W	(F240)
R705 ⚠	1-215-868-00	METAL OXIDE 680 5% 1W F	(F240)
R705 ⚠	1-216-430-11	METAL OXIDE 390 5% 1W F	(F170)
R706	1-249-427-11	CARBON 6.8K 5% 1/4W	(F170:GERMANY)
R706	1-249-428-11	CARBON 8.2K 5% 1/4W	(F170:AEP, UK, E)
R706	1-249-429-11	CARBON 10K 5% 1/4W	(F240)
R801 ⚠	1-215-912-11	METAL OXIDE 150 5% 3W F	(F170:AEP, UK, E)
R801 ⚠	1-216-475-11	METAL OXIDE 120 5% 3W F	(F170:GERMANY)
R801 ⚠	1-216-478-11	METAL OXIDE 390 5% 3W F	(F240)
R802 ⚠	1-215-915-11	METAL OXIDE 470 5% 3W F	(F170:GERMANY)
R802 ⚠	1-215-918-00	METAL OXIDE 1.5K 5% 3W F	(F240)
R802 ⚠	1-216-479-11	METAL OXIDE 560 5% 3W F	(F170:AEP, UK, E)
R805	1-249-417-11	CARBON 1K 5% 1/4W	
R806	1-249-417-11	CARBON 1K 5% 1/4W	
R901	1-249-417-11	CARBON 1K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV501	1-238-596-11	RES, ADJ, CAREBON 470	
RV601	1-238-596-11	RES, ADJ, CAREBON 470	
		< RELAY >	
RY701	1-515-501-00	RELAY	
		< SWITCH >	
S303	1-572-804-11	SWITCH, SLIDE (INPUT SELECTOR)	
S501	1-571-973-11	SWITCH, ROTARY (SPEAKERS)	
		< TERMINAL >	
TM501	1-537-227-11	TERMINAL BOARD (SP)	(F170:AEP)
TM501	1-537-228-11	TERMINAL BOARD (SP)	(F170:GERMANY)
TM501	1-537-235-11	TERMINAL BOARD (SP)	(F170:UK, E/F240)
TM801	1-808-881-91	THERMISTOR (POSITIVE) 2.2	
TM802	1-808-881-91	THERMISTOR (POSITIVE) 2.2	

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* A-4345-123-A PANEL BOARD, COMPLETE (F240)

* A-4345-133-A PANEL BOARD, COMPLETE (F170)

****

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

PANEL POWER LED TRANSFORMER

Ref. No.	Part No.	Description			Remark
	* 1-639-816-11	POWER BOARD			
		**********			
	* 1-639-817-11	LED BOARD			
		*********			
	* 1-639-818-11	TRANSFORMER BOARD			
		**********			
	1-533-225-11	HOLDER, FUSE			
	* 1-564-214-11	PIN, CONNECTOR 3P			
	* 3-362-478-21	HOLDER (T), LED			
		< CAPACITOR >			
C1	⚠· 1-161-744-00	CERAMIC	0.01uF		400V
C301	1-126-163-11	ELECT	4.7uF	20%	50V
C302	1-162-217-31	CERAMIC	56PF	5%	50V
C303	1-126-163-11	ELECT	4.7uF	20%	50V
C304	1-136-155-00	FILM	0.015uF	5%	50V
C305	1-136-161-00	FILM	0.047uF	5%	50V
C306	1-136-169-00	FILM	0.22uF	5%	50V
C307	1-136-175-00	FILM	0.68uF	5%	50V
C309	1-162-286-31	CERAMIC	220PF	10%	50V
C310	1-136-161-00	FILM	0.047uF	5%	50V
C311	1-126-022-11	ELECT	47uF	20%	16V
C401	1-126-163-11	ELECT	4.7uF	20%	50V
C402	1-162-217-31	CERAMIC	56PF	5%	50V
C403	1-126-163-11	ELECT	4.7uF	20%	50V
C404	1-136-155-00	FILM	0.015uF	5%	50V
C405	1-136-161-00	FILM	0.047uF	5%	50V
C406	1-136-169-00	FILM	0.22uF	5%	50V
C407	1-136-175-00	FILM	0.68uF	5%	50V
C409	1-162-286-31	CERAMIC	220PF	10%	50V
C410	1-136-161-00	FILM	0.047uF	5%	50V
C411	1-126-022-11	ELECT	47uF	20%	16V
		< CONNECTOR >			
CN301	* 1-568-832-11	SOCKET, CONNECTOR 13P			
CNP2	* 1-564-321-00	PIN, CONNECTOR 2P			
CNP3	* 1-564-321-00	PIN, CONNECTOR 2P			
CNP4	* 1-564-321-00	PIN, CONNECTOR 2P (F170:E)			
CNP5	* 1-564-687-11	PIN, CONNECTOR 3P (F170:E)			
		< CORD, POWER >			
CP1	⚠· 1-575-651-11	CORD, POWER (AEP, GERMANY)			
CP1	⚠· 1-575-652-11	CORD, POWER (UK)			
CP1	⚠· 1-575-653-11	CORD, POWER (E)			
		< DIODE >			
D901	8-719-303-00	DIODE SEL2510C-C			
D902	8-719-303-00	DIODE SEL2510C-C			
D904	8-719-301-52	DIODE SEL2810A-C			
D905	8-719-301-52	DIODE SEL2810A-C			
		< FUSE >			
F1	⚠· 1-532-286-00	FUSE TIME-LAG 2.5A (F240)			
F1	⚠· 1-532-259-00	FUSE TIME-LAG 1.6A (F170)			
F2	⚠· 1-532-259-00	FUSE TIME-LAG 1.6A (F170:E)			

Ref. No.	Part No.	Description			Remark
		< IC >			
IC301	8-759-634-50	IC M5218AL			
		< RESISTOR >			
R119	1-249-405-11	CARBON	100	5%	1/4W
R219	1-249-405-11	CARBON	100	5%	1/4W
R301	1-249-417-11	CARBON	1K	5%	1/4W
R302	1-249-417-11	CARBON	1K	5%	1/4W
R303	1-249-423-11	CARBON	3.3K	5%	1/4W
R304	1-249-442-11	CARBON	510	5%	1/4W
R305	1-249-442-11	CARBON	510	5%	1/4W
R306	1-249-408-11	CARBON	180	5%	1/4W
R307	1-247-903-00	CARBON	1M	5%	1/4W
R308	1-247-903-00	CARBON	1M	5%	1/4W
R309	1-249-422-11	CARBON	2.7K	5%	1/4W
R310	1-247-830-11	CARBON	910	5%	1/4W
R311	1-249-441-11	CARBON	100K	5%	1/4W
R312	1-249-429-11	CARBON	10K	5%	1/4W
R313	1-249-429-11	CARBON	10K	5%	1/4W
R314	1-247-903-00	CARBON	1M	5%	1/4W
R401	1-249-417-11	CARBON	1K	5%	1/4W
R402	1-249-417-11	CARBON	1K	5%	1/4W
R403	1-249-423-11	CARBON	3.3K	5%	1/4W
R404	1-249-442-11	CARBON	510	5%	1/4W
R405	1-249-442-11	CARBON	510	5%	1/4W
R406	1-249-408-11	CARBON	180	5%	1/4W
R407	1-247-903-00	CARBON	1M	5%	1/4W
R408	1-247-903-00	CARBON	1M	5%	1/4W
R409	1-249-422-11	CARBON	2.7K	5%	1/4W
R410	1-247-830-11	CARBON	910	5%	1/4W
R411	1-249-441-11	CARBON	100K	5%	1/4W
R412	1-249-429-11	CARBON	10K	5%	1/4W
R413	1-249-429-11	CARBON	10K	5%	1/4W
R414	1-247-903-00	CARBON	1M	5%	1/4W
R902	1-247-747-11	CARBON	470	5%	1/2W
R903	1-247-749-11	CARBON	560	5%	1/2W
		< VARIABLE RESISTOR >			
RV301	1-238-513-11	RES, VAR, CARBON 150K/150K (BALANCE)			
RV302	1-241-548-11	RES, VAR, CARBON 10K (TREBLE)			
RV303	1-241-549-11	RES, VAR, CARBON 10K (BASS)			
RV304	1-241-550-11	RES, VAR, CARBON 120K/120K (VOLUME)			
		< SWITCH >			
S1	1-553-318-11	SWITCH, PUSH (1 KEY) (POWER)			
S2	⚠· 1-570-307-11	SWITCH (VOLTAGE SELECTOT) (F170:E)			
S301	1-571-112-21	SWITCH, PUSH (1 KEY) (LOUDNESS)			
S302	1-572-642-11	SWITCH, PUSH (1 KEY) (SOURCE DIRECT)			
S304	1-571-872-11	SWITCH, PUSH (1 KEY) (TAPE/DAT MONITOR)			
		< TRANSFORMER >			
T1	⚠· 1-450-575-11	TRANSFORMER, POWER (F240)			
T1	⚠· 1-450-576-11	TRANSFORMER, POWER (F170:AEP)			
T1	⚠· 1-450-577-11	TRANSFORMER, POWER (F170:GERMANY)			

PANEL | POWER | LED | TRANSFORMER

Ref. No.	Part No.	Description	Remark
T1	⚠ 1-450-578-11	TRANSFORMER, POWER (F170:UK)	
T1	⚠ 1-450-579-11	TRANSFORMER, POWER (F170:E)	

****

MISCELLANEOUS
****

7		1-553-318-41 SWITCH, PUSH (AC POWER) (1 KEY)	
11		1-590-036-11 WIRE, FLAT TYPE (13 CORE)	
21		1-572-803-11 SWITCH, ROTARY SLIDE (INPUT SELECTOR)	
64	⚠	1-569-007-11 ADAPTOR, CONVERSION 2P (F170:E)	

****

ACCESSORY & PACKING MATERIAL
****

	*	3-704-343-01	SHEET (STANDARD), PROTECTION (F240)
		3-753-389-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP, UK, E, GERMANY)
		3-753-389-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)
	*	4-944-050-01	INDIVIDUAL CARTON
	*	4-945-810-01	CUSHION (LEFT) (F240)
	*	4-945-811-01	CUSHION (RIGHT) (F240)

****

HARDWARE LIST
****

# 1	7-621-849-00	SCREW (BV/RING)
# 2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
# 3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
# 4	7-682-548-04	SCREW +BVTT 3X8 (S)
# 5	7-682-549-04	SCREW +BVTT 3X10 (S)
# 6	7-682-560-04	SCREW +BVTT 4X6 (S)

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